
Environmentally Responsible

*Tangible Result Driver – Dave Nichols,
Director of Project Development*

MoDOT takes great pride in being a good steward of the environment, both in the construction and operation of Missouri's transportation system and in the manner in which its employees complete their daily work. The department strives to protect, conserve, restore and enhance the environment while it plans, designs, builds, maintains and operates a complex transportation infrastructure.



Environmentally Responsible

Percent of projects completed without environmental violation

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Kathy Harvey, Technical Support Engineer

Purpose of the Measure:

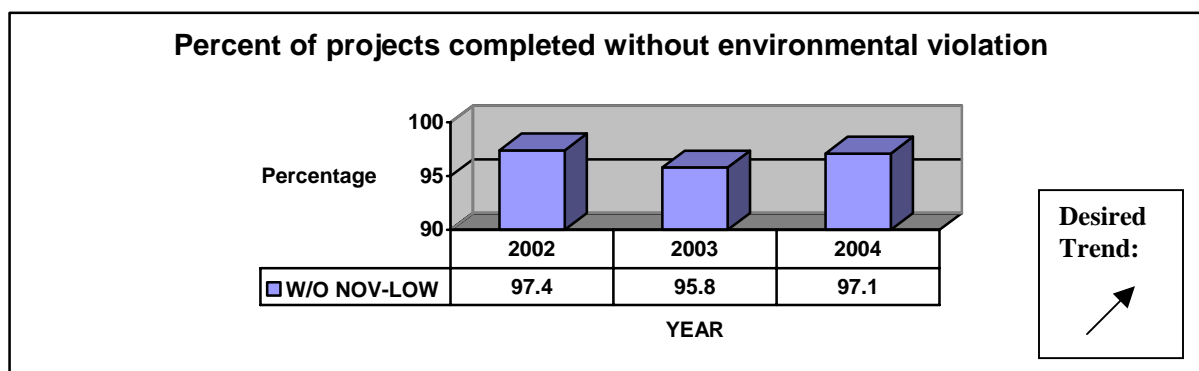
This measure tracks environmental violations the department receives. MoDOT projects must comply with several environmental laws and regulations. In order to be in compliance, MoDOT makes commitments throughout the project development process that must be carried forward during construction and maintenance. In addition, the various permits obtained for the projects also contain specific requirements that must be complied with. If a violation is noted, it can result in either a Letter of Warning (LOW) or a Notice of Violation (NOV) to MoDOT.

Measurement and Data Collection:

LOWs and NOVs both are written correspondence to MoDOT from the regulatory agency. MoDOT keeps a database of all of these received by project number. The report shown is by project with a list of violations received, which may span several years. The chart below is based on a calendar year of projects reported to be completed during that year and the number of violations received.

Improvement Status:

Over 95 percent of all projects have been completed without an environmental violation in the last three years. Our goal is to complete 100 percent of our projects without a NOV and to complete 95 percent of our projects without a LOW. Future reports will be able to separate violations by category.



Environmentally Responsible

Percent of air quality days that meet Environmental Protection Agency (EPA) standards by metropolitan area

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Kyle Kittrell, Director of Transportation Planning

Purpose of the Measure:

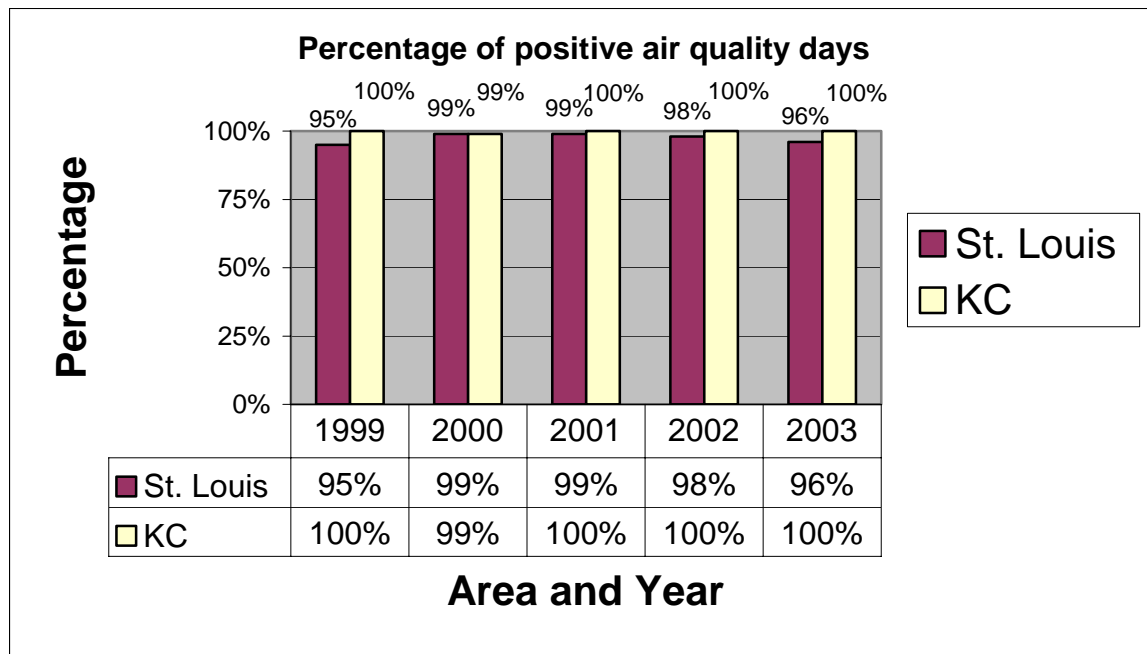
This measure tracks MoDOT's role in improving the air quality of Missouri's metro areas. The Environmental Protection Agency (EPA) approves state plans to improve air quality. MoDOT makes every effort to design and builds roads that meet air quality standards and do not violate the EPA-approved plans.

Measurement and Data Collection:

EPA establishes several air quality standards for the United States. Two of these standards affect Missouri. Air quality readings are collected throughout the state during the air quality season – April through October. Extensive data is collected in St. Louis and Kansas City, the state's most affected areas. The data contained in the table below reflects the percentage of days, by metro area, that met the EPA standards.

Improvement Status:

MoDOT continually works with other state and local agencies, along with industry, to help the state's affected areas meet these standards and improve air quality.



Environmentally Responsible

Percent of alternative fuel consumed

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Dave DeWitt, Director of Administrative Services

Purpose of the Measure:

This measure tracks the use of alternative fuels. It shows MoDOT's contribution toward environmental responsibility and conservation of resources.

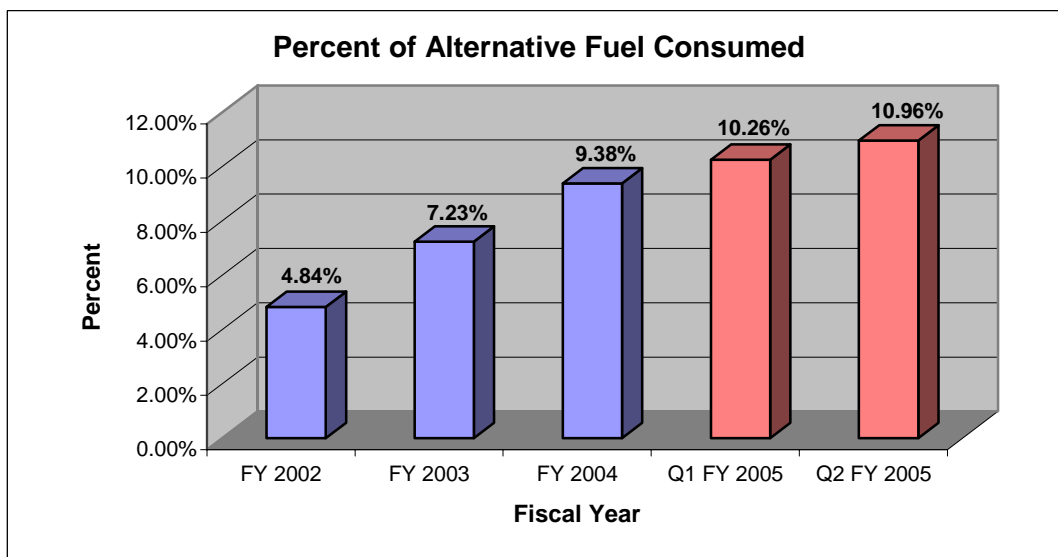
Measurement and Data Collection:

When a user pumps fuel into a MoDOT vehicle or piece of equipment, that usage by gallon and by fuel type is captured in the SAMII system. Reports are generated to extract the number of gallons used from that system.

Improvement Status:

MoDOT has had three consecutive years of increases in the amount of alternative fuel consumed. Fiscal year 2005 consumption is also showing an increasing trend. In fiscal year 2004, MoDOT consumed 9.38 percent of its total fuel usage in alternative fuels compared to 7.23 percent in fiscal year 2003 and 4.84 in fiscal year 2002.

In 2002, MoDOT began requesting bids to acquire more alternative fueled engines on light and heavy-duty pickups, vans and SUVs. Currently the department operates two E-85 bulk fuel stations and is planning to install others. MoDOT's exclusive use of biodiesel in the St. Louis district has helped that area to improve its air quality. The department plans to expand to other areas of the state as biodiesel becomes more available.



**Desired
Trend:**



Environmentally Responsible

Number of historic resources preserved as compared to those impacted

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Bob Reeder, Historic Preservation Coordinator

Purpose of the Measure:

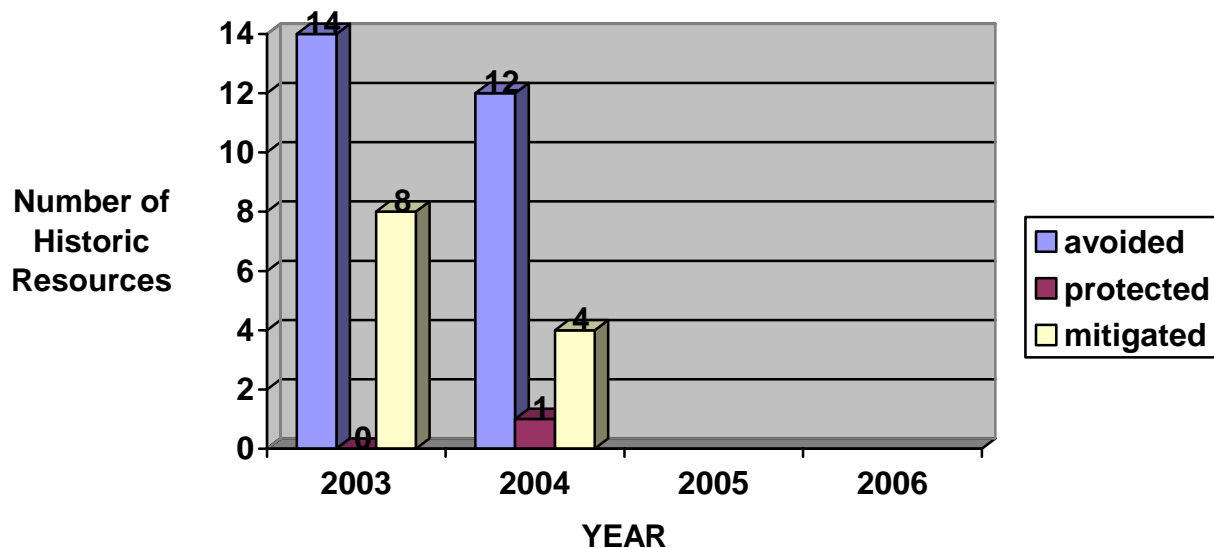
Federal historic preservation laws require federally-funded projects to avoid or mitigate project impacts to historic buildings and bridges whenever feasible. Establishing and maintaining local and public support for our projects also requires MoDOT to avoid or save historic resources, or mitigate project impacts to these resources since the resources often are highly visible, well known, and may be important sources of pride and historical identity for local communities and groups. Historic resources may be listed on state and national register and their status tracked by state and national historic preservation advocacy groups; project impacts to these resources can bring adverse local, state and national attention to the project and the agency overall.

Measurement and Data Collection:

Data collection will begin at approved Conceptual Plans stage. As preliminary plans, right of way plans and final plans are prepared by the district, the department will track the number of historic resources in the project footprint and the number of times we successfully consult with the district to make changes to the plans to avoid or protect these resources versus the number of resources for which MoDOT has to mitigate.

Improvement Status:

The data shows that for the last two years MoDOT has avoided and protected more than twice as many historic resources (27) as it has impacted (12)



Environmentally Responsible

Ratio of acres of wetlands created compared to the number of acres of wetlands impacted

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Gayle Unruh, Wetland Coordinator

Purpose of the Measure:

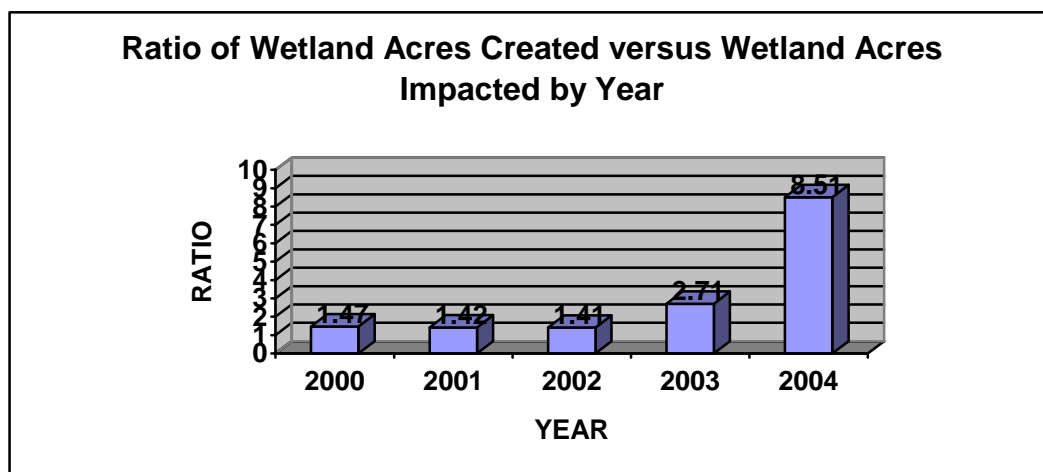
Wetlands are a valuable resource in Missouri, having beneficial functions such as wildlife habitat, flood storage and water quality improvement. In addition to these benefits, it is required in the Clean Water Act that impacts to wetlands be avoided or minimized or that wetlands be recreated when a wetland is destroyed during a transportation project. MoDOT has unavoidable impacts on wetlands and thus recreates wetlands. The national goal, set by the FHWA, for recreating wetland is to construct 1.5 acres of wetland for every 1.0 acre of wetland impacted. Recreating wetlands at this ratio helps to offset the lost beneficial functions during the time it takes for a wetland to develop, which in the case of forested wetlands can be a considerable time period. This measure helps ensure that MoDOT is doing its part to maintain wetlands in Missouri.

Measurement and Data Collection:

Acres of impact will be taken from Clean Water Act permits and will be listed by project. Acres of wetland construction will be taken from roadway design plans or mapped wetland areas recreated by MoDOT, again listed by project. Impacts may occur in a different year from the mitigation, so for the purposes of this measure, the timeframe for the reporting is when the mitigation construction is complete based on a calendar year.

Improvement Status:

MoDOT has exceeded its goal of a 1.5:1.0 ratio the last two years, and was just below that standard in each of the previous three years.



**Desired
Trend:**



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Number of projects on which MoDOT proactively avoids, protects or restores sensitive species or habitat

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Kathy Harvey, Technical Support Engineer

Purpose of the Measure:

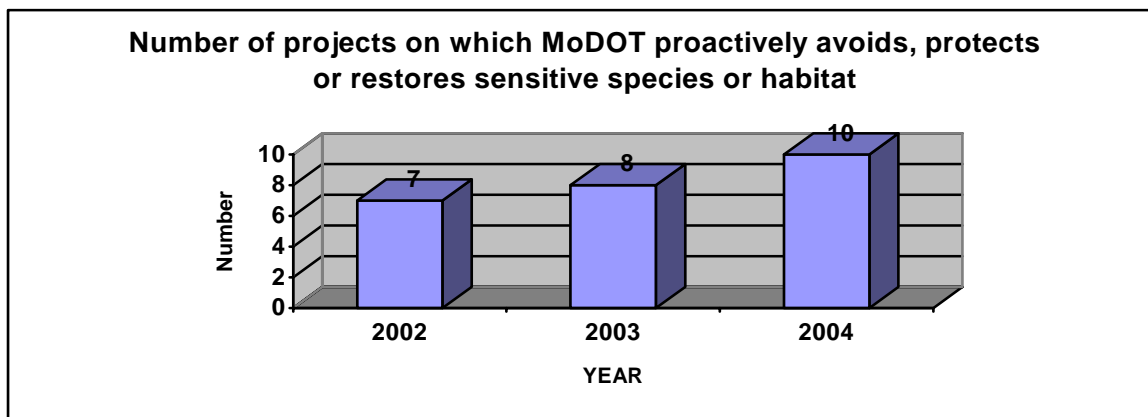
Missouri is home to many rare species of plants and animals, some of which are on the federal endangered species list. The Endangered Species Act of 1973 (as amended) prohibits harm or harassment of these species. Avoiding or minimizing harm to these species and protecting or restoring their habitat is a fundamental obligation of this organization. Avoidance and/or protection is the first goal of our efforts, but restoration is the minimum acceptable result.

Measurement and Data Collection:

On all MoDOT projects, the department investigates and informs the US Fish and Wildlife Service of any activity in the vicinity of a known threatened or endangered species or critical habitat. Through the required consultation process with them, primarily through letters, MoDOT has the data to report on this measure. Many MoDOT projects will never get close to a site and therefore will not be included in this data. The report will document the total number of projects per year that actively avoid, protect or replace sensitive habitat.

Improvement Status:

Once a few years of tracking are in place, conclusions can be drawn about what areas need improvement and how improvement would be defined.



Environmentally Responsible

Percent of erosion prevention expenditures in relation to grading costs on construction projects

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Jerry Hirtz, Technical Support Engineer, Construction & Materials

Purpose of the Measure:

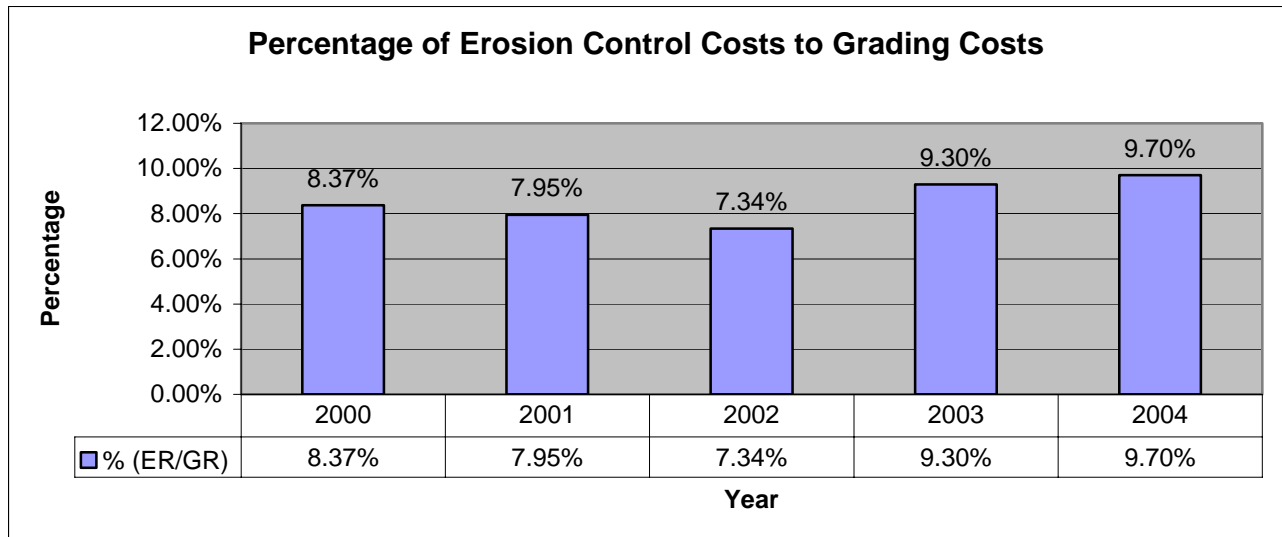
This measure demonstrates MoDOT commitment to preventing erosion from grading activities on construction projects.

Measurement and Data Collection:

Erosion control pay items and grading costs are tracked through MoDOT's automated contract administration software, SiteManager. Erosion exposure is proportional to the amount of grading being performed on the project. A comparison of costs to implement erosion best management practices (BMPs) to our grading activities demonstrates MoDOT's efforts to contain sediment on the project and can be evaluated as needed.

Improvement Status:

MoDOT's efforts to prevent erosion are reflected by the percentage of expenditures for the necessary erosion prevention measure to contain sediment on projects. The percentage of expenditures compared to the number of violations issued for the same period demonstrates performance. Chart graphics cannot sufficiently depict actual performance. Precipitation has a substantial influence upon erosion expenditures.



YEAR	2000	2001	2002	2003	2004
GRADING (\$M)	96.6	105.6	103.6	88.2	73.2
EROSION (\$M)	8.0	8.4	7.6	8.2	7.1

Environmentally Responsible

Number of trees planted compared to number of acres cleared and grubbed

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Jerry Hirtz, Technical Support Engineer, Construction & Materials

Purpose of the Measure:

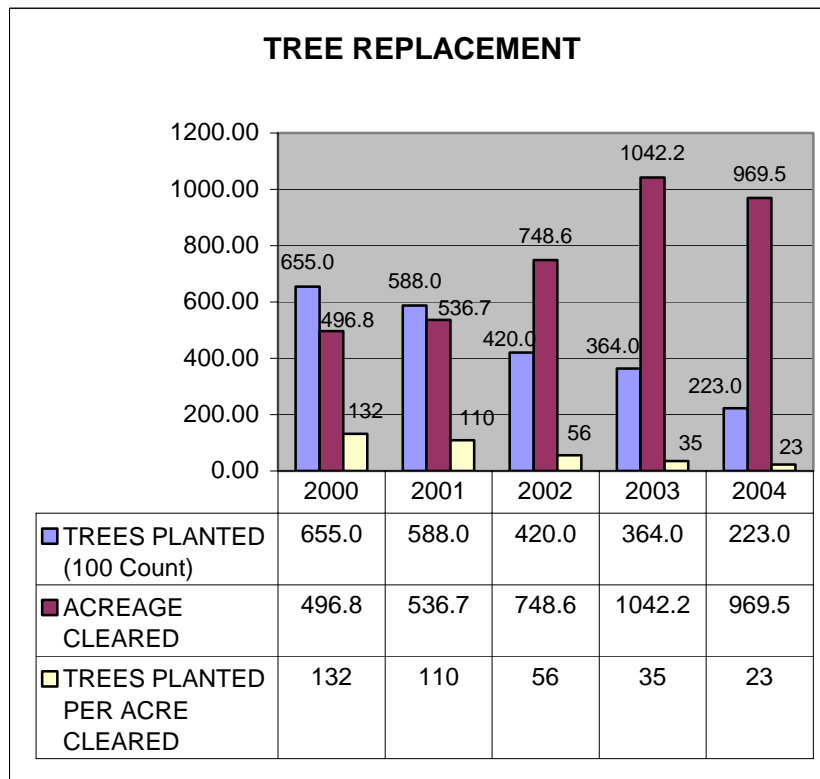
This measure tracks MoDOT's effort to replace trees removed as a result of clearing and grubbing operations on its construction projects.

Measurement and Data Collection:

MoDOT is committed to plant trees to replace those removed by construction operations. MoDOT documents acreage cleared through its contract administration processes and a record is maintained of trees ordered each year for spring planting. In the future, this measure can be amended to compare trees planted to trees removed as counting procedures are refined and improved.

Improvement Status:

It would be anticipated that as the total acreage cleared increases, the number of trees planted should likewise increase. The data, however, shows just the opposite.



Environmentally Responsible

Number of tons of recycled materials used in pavements

Results Driver: Dave Nichols, Director of Project Development

Measurement Driver: Mark Shelton, Assistant State Construction and Materials Engineer

Purpose of the Measure:

This measure will track MoDOT's efforts to be environmentally responsible while being fiscally responsible.

Measurement and Data Collection:

Improvement Status:

**Measure is Under
Development**